L 10506-65   EWT(d)/EEC(k)-2/T/EED-2/EWP(1)   Pm-4/Po-4/Pq-4/Pg-4/Ph-4/Pk-4/
P1-4   IJP(c)/ASD(a)-5/AEDC(a)/BSD/ESD(c)/AFMD(p)/ASD(d)/ESD(dp)/AFETR/ESD(t)/
AFTC(b)/FAEM(t)   BB/GG
ACCESSION NR: AT4046516   S/2976/64/000/004/0005/0012   B

AUTHOR: Anisimov, B. V. (Doctor of technical sciences, Professor); Solomatin, N. M.

TITLE: Discrete electronic device for solving information-logic problems

SOURCE: Moscow. Vy*sshaya tekhnicheskoye uchilishche. Vy*chislitel'naya
tekhnika, no. 4, 1964, 5-12

TOPIC TAGS: logic, information problem, data processing, logic problem, magnetic
drum, magnetic tape

ABSTRACT: The authors provide a definition of what is meant by the term "informa-
tion-logic problem", point out some specific peculiarities of this class of
problem, and analyze the difficulties encountered in solving such problems on
universal, discrete, program-controlled systems. The need for specially designed
hybrid systems for information processing, which will combine the characteristics
of universal discrete systems and of systems specially adapted to the solution of
information-logic problems, is pointed out as a possible answer to the problem.
Such a machine is the "Ural-4". In the present article, the authors consider the
solution of such a problem, relating to the processing of industrial information,
by means of a specialized electronic device using magnetic drums and tapes. It is

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L 10506-65
ACCESSION NR: AT4046516

pointed out that, from the point of view of discrete technology, the unit of information to be processed is a word consisting of two parts. The information characteristics and algorithm of the process are fully described, with special attention to the recovery operator and the rules for writing the operator circuits of the algorithms. The sequential order followed in the execution of the algorithms is explained and a block diagram is given for a discrete device capable of carrying out the algorithms discussed in the paper. This device is said to be an integral part of a specialized system with a capability of processing 20,000 words. Each word contains 56 binary-digits, of which 19 are assigned to attrition and 37 to content. Two magnetic drums are employed with a capacity of 10,000 nineteen-place binary-digit numbers and three tape-advance mechanisms with four tape-recorders in each. The capacity of one recorder is 25,000 nineteen-place binary-digit numbers. Orig. art. has: 1 figure and 9 formulas.

ASSOCIATION: none

SUBMITTED: 00   ENCL: 00

NO REF SOV: 004   SUB CODE: DP
Card 2/2   OTHER: 000

L 13073-65   EWT(d)/EEC(k)~2/EED-2/EWP(1)   Pg-4/Pk-4/Po-4/Pq-4   IJP(c)
AFETR/AFTC(b)/BSD/ASD(a)~5/RAEM(i)/ESD(dp)   GG/BB

ACCESSION NR: AT4046523   8/2976/64/000/004/0090/0098

AUTHORS: Anisimov, B. V.; Solomatin, N. M.   B

TITLE: Device for recording synchronizing and control pulses on a magnetic drum

SOURCE: Moscow. Vy*ssheye tekhnicheskoye uchilishche. Vy*chislitel'naya
tekhnika, no. 4, 1964, 90-98

TOPIC TAGS: magnetic drum, drum storage, computer memory, control pulse recording,
synchronizing pulse recording

ABSTRACT: Among the different methods of placing the synchronizing and control
pulses on a magnetic drum memory, particular attention is directed to the mechani-
cal and the magnetic method. The disadvantages of the former are noted, and
various non-mechanical (principally magnetic) techniques for recording the pulses
on one- and three-track drums are considered. The authors note that in almost all
cases the suggested methods for recording synchronizing and control pulses on
magnetic drums involve either a concrete discrete system (thus being unacceptable
in a general case) or the development of separate and independent mechanisms
which are excessively primitive and, thus, also fail to provide a solution to the
problem in a general sense. In the present article, the authors consider an

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L 13073-65

ACCESSION NR: AT4046523

electronic device for recording synchronizing and control pulses which provides a solution to the problem in a general case. Specifically, it permits: 1) the marking off of drums on which the working information is recorded and reproduced by the sequential, parallel or sequential-parallel methods; 2) the assignment of any number of synchronizing and control pulses; 3) the varying of the frequency of the synchronizing and control pulses; 4) the marking off of a magnetic drum during one revolution for all tracks simultaneously (after which the device is switched off; 5) the marking off of the drum from any arbitrarily selected position on the drum, and also in a forced manner from a single pulse inscribed on the drum; 6) the simultaneous marking off of several drums. An operational diagram of the device is given and its operational principles are analyzed on the basis of an example involving the recording of synchronizing and control pulses on three tracks (as required in the sequential-parallel method). Individual circuit components of the device are discussed separately and in somewhat greater detail. These include the pulse generator, the recording amplifier, and the reproduction amplifier. It is claimed that an experimental check both of the unit as a whole and of its individual components, revealed the operation to be quite reliable. Orig. art. has: 8 figures and 4 formulas.

Card 2/3

L 13073-65

ACCESSION NR: AT4046523

ASSOCIATION: none

SUBMITTED: 00   NO REF SOV: 001   OTHER: 001

SUB CODE: DP   ENCL: 00

Card 3/3

SOLOMATIN, O.M., inzh.

Hand wrenches for high-strength bolts. Transp. stroi. 12 no.5:49-50
My '62.   (MIRA 15:6)
                    (Wrenches)

SOLOMATIN,P. (Sestroretsk)

Dermatitis caused by sumac. Vest. derm. i ven. 36 no.10:38-42
0'62   (MIRA 16:11

SOLOMATIN, P.N. (Yuzhno-Kuril'sk)

Treatment of some skin diseases with water from the hot springs
of the Kunashir Island. Vest derm. i ven. 38 no.3:56-61 Mr '64.
(MIRA 18:4)

Vasil'ev, P.V.

Treatment of some skin diseases with the waters of the hot
springs of Kunashir Island. Vop. kur., fizioter. i lech. fiz.
kul't. 30 no.1:78-79 Ja-F '65.   (MIRA 18:8)

SOV/25-59-3-10/46

30(1)

AUTHOR: Solomatin, S.

TITLE: Dikotex (Dikoteks)

PERIODICAL: Nauka i zhizn', 1959, Nr 3, p 30 (USSR)

ABSTRACT: In 1958, several dozens of thousand hectares of flax seeds were treated with the new Czech herbicide "Dikotex" to inhibit the growth of weeds. However, the sprinkling of Dikotex over flax fields proved to be difficult since large quantities adversely affect the physiological process of the plant, while small quantities cause an intensified growth. The best time for treatment is at a plant height of 8-10 cm, when no damage can be done to the narrow leaves. To increase the efficiency of sprinkling methods, M.Ya. Berezovskiy, Candidate of Agricultural Sciences, and Scientific Co-Worker of the Pochvenno-agronomicheskaya stantsiya imeni V.R. Vil'yamsa (Soil and Agricultural Station imeni V.R. Vil'yams) suggested

Card 1/2

POLOVCHENKO, I. G.; LOGINOV, V. I.; DUBENKO, Yu. S.; SOLOMATIN, S. M.

Desulfuration of cast iron by magnesium in the ladle. Izv. vys.
ucheb.zav.; chern.met. 7 no. 4:31-36 '64.   (MIRA 17:5)

1. Dneprodzerzhinskiy metallurgicheskiy zavod-vtuz.

SOLOMATIN, S.S.

Characteristics and nature of monophasic potentials. Trudy Inst. norm.i pat. fiziol. AMN SSSR 7:92-93 '64.

(MIRA 18:6)

1. Laboratoriya vozrastnoy fiziologii i patologii (zav. - prof. I.A.Arshavskiy) Institute normal'noy i patologicheskoy fiziologii AMN SSSR.

L 22345-66
ACC NR; AP6013513   SOURCE CODE;   UR/0120/66/000/002/0129/0131

AUTHOR: Barenboym, G. M.; Domanskiy, A. N.; Solomatin, V. P.

ORG: Cytology Institute, AN SSSR, Leningrad (Institut tsitologii AN SSSR)

TITLE: Characteristics of cooled photomultipliers of FEU-39 and FEU-46A types

SOURCE: Pribory i tekhnika eksperimenta, no. 2, 1966, 129-131

TOPIC TAGS: photomultiplier, photocathode, light emission

ABSTRACT: Results are given of an investigation of the sensitivity and the dark current of the FEU-39 and FEU-46A nitrogen-cooled photo-multipliers having antimony-cesium photocathodes without a conducting substrate. Light from an SVD-120A lamp passed through the quartz light guide and the ZMR-3 monochromator, illuminating the photocathodes. A photocurrent two or three times greater than the dark current at room temperature corresponds to the "weak" light flux with 5×10^3 photons/sec. The photocurrent due to a "strong" light flux was not less than 5×10^{-8} amp which, according to the calculation, corresponds to a flux with 5×10^5 photons/sec. The signal from the "weak" light flux and the photomultiplier noise were measured by counting the pulses developing across the photomultiplier load. Signals from the

Card 1/2   UDC: 621.383.53

L 22345-66

ACC NR: AP6013513

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"strong" light flux were measured by the microammeter. The following conclusions were reached: Cooling of photomultipliers limits the range of operating light fluxes. If the recorded light flux is sufficiently weak (< 5 x 10^3 photons/sec), the photomultiplier may be cooled to the temperature of   liquid nitrogen. Under the action of "strong" light fluxes (< 5 x 10^5 photons/sec), cooling below −80C leads to a sensitivity drop. The sensitivity, which is dependent at the given temperature on the intensity of the light flux, is not immediately restored, which leads to certain limitations in rapid measurements. Optimum   cooling temperatures and signal-to-noise ratios for various light fluxes are determined. Orig. art. has: 4 figures.   .[GS]

SUB CODE: 09/ SUBM DATE: 29Mar65/ ORIG REF: 008/ ATD PRESS:4242

Card 2/2

SOLOMATIN, V.I., inzh.

Adjustment nomograms for D-370 dosing devices used in mixers.
Stroi. i dor. mashinostr. 3 no. 8:19 Ag '58.   (MIRA 11:8)
                    (Mixing machinery)

KAGAN, F.I., kand. veter. nauk; SOLOMATIN, V.I., mladshiy nauchnyy
        sotrudnik

        Biomycin and terramycin treatment of necrobacillosis in
        cattle and sheep. Veterinariia 40 no.3:53-54 Mr '63.
                                                (MIRA 17:1)

        1. Gosudarstvennyy nauchno-kontrol'nyy institut veterinarnykh
        preparatov.

SOLOMATIN, V., komandir ekipazha samoleta An-2.

Looking into the future. Grazhd. av. 20 no.1:11 Ja '63.
(MIRA 16:4)

(Aeronautics in agriculture)

SAKHAROV, B.N.,inzh.; SOLOMATIN, V.I.,inzh.

Using movable mixing plants in making black-gravel pavements.
Avt.dor. 22 no.1:18-19 Ja '59. (MIRA 12:2)
(Pavements) (Road machinery)

MIKHAYLOV, Aleksey Nikolayevich; SOLOMATIN, V.I., red.; GANYUSHIN, A.I.,
red.izd-va; DONSKAYA, G.D., tekhn.red.

[Operating the D-370 mixer and the D-371 loader] Ekspluatatsiia
smesitelia D-370 i pogruzchika D-371. Moskva, Nauchno-tekhn.izd-vo
M-va avtomobil'nogo transp. i shosseinykh dorog RSFSR, 1960. 65 p.
(MIRA 13:12)

(Road machinery)

SOLOV'YEV, Nikolay Vladimirovich; STUKUSHIN, V.I., retsenzent; SOLOMATIN.
V.M., retsenzent; FRIK, A.O., redaktor; KAN, P.M., redaktor
izdatel'stva; KRASNAYA, A.K., tekhnicheskiy redaktor

[Electric propeller equipment for river boats fo the Rossia"
type] Elektrogrebnaia stanovka rechnykh sudov tipa "Rossiia."
Moskva, Izd-vo "Rechnoi transport," 1957. 65 p. (MIRA 10:9)
(Ship propulsion, Electric)

SOLOMATIN, Vladimir Mikhaylovich, inzh.; SUKHOV, Dmitriy Konstantinovich,
inzh.; SKVORTSOV, D.R., retsenzent; KAN, P.M., red. izd-va;
BODROVA, V.A., tekhm. red.

[Electrical engineering and telecommunication] Elektrotekhnika
i elektrosviaz'. Moskva, Izd-vo "Rechnoi transport," 1960.
347 p.
(MIRA 15:1)
(Electricity on ships)   (Telecommunication)

SOLOMATIN, V.M.; YAURE, A ., . . ., ...; KONSTANTINOV, V.F.,
retsenzent; PETUKH. , M.., : .. .. .; KRUGLIK, G.L.,
retsenzent; TUPITSA, I.S., retsenzent; FRIK, A.O., inzh.,
nauchn. red.

[Manual for ship engineers and electricians] Spravochnik
elektromekhanika i elektrika sudna. Moskva, Izd-vo
"Rechnoy transport," 1963. 713 p.   (MIRA 17:2)

SOLOMATIN, V.P.

Faulty construction of track boxes. Avtom., telem. i sviaz' 4 no.2:
44 F '60.   (MIRA 13:6)

1. Starshiy elektromekhanik Kurskoy distantsii signalizatsii i svyazi
Moskovskoy dorogi.
           (Railroads--Equipment and supplies)

ABSTRACT: A two-circuit parametric frequency divider with a series- or parallel-connected pumping frequency generator is studied. The study includes a theoretical summary of the operation of the device and an analysis and comparison of the operations of both types of circuits for the case when division factor n = 4. A parametric frequency divider with a D7 diode and a pumping frequency of 8—10 Mc was investigated. For the circuit with the series-connected pumping frequency generator, small relative frequency division bands were achieved. At n = 4 the relative band, $\Delta f/f = 1\%$. With an increase in the division factor, the band decreased, and at n = 8 division no longer took place. In the case of the parallel-connected pumping frequency generator

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L 11274-63
ACCESSION NR: AP3003716

division by a factor of 3—30 was observed. The dependence of oscillation
amplitude in the division band and in the low-frequency circuit on detuning
at a constant pumping current was plotted. At small pumping currents, os-
cillation amplitude changed with detuning, but with an increase in pumping
current these changes became insignificant. The graph representing the de-
pendence of division bandwidth on pumping current at a constant diode bias.
showed an increase in bandwidth with an increase in pumping frequency. At
large pumping currents, the bandwidth begins to decrease. This phenomenon is
probably caused by the occurrence of conductivity current in the diode. Orig.
art. has: 6 figures, 10 formulas, and 1 table.

ASSOCIATION: Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta
im. M. V. Lomonosov. Kafedra teorii kolebaniy (Physics Faculty, Moscow State
University. Department of Oscillation Theory)

SUBMITTED: 20Jun62   DATE ACQ: 02Aug63   ENCL: 00

SUB CODE: SD   NO REF SOV: 005   OTHER: 000

1s/W
Card   2/2

AUTHOR: Chetkin, M. V.; Solomatin, V. S.

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

TITLE: The magneto-optic modulation of an infrared gas laser

SOURCE: Fizika tverdogo tela, v. 8, no. 11, 1966, 3388-3390

TOPIC TAGS: gas laser, infrared laser, laser output modulation, Q switching, magnetooptic modulation

ABSTRACT: An experimental study was made of the modulation of output from an infrared gas laser by means of the Faraday effect with a view to devising a means of varying the emission intensity of Q-switching of infrared lasers. The emission from an He-Ne laser operating at 3.39 μ was monitored by a GaSb photodiode. A $Y_3Fe_5O_{12}$ single crystal 0.18 cm thick was used to transmit one-half of the incident laser radiation and was placed in a 15-turn coil 1.2 cm in diameter. The 2000-oe saturating magnetic field was set up by means described elsewhere (P. L. Kapitsa, UFN, 11, 533, 1931) using discharge currents from two 0.1 and 0.004 uf condensers charged to 1 and 4 kv, respectively. The minimum magnetization time was 0.125 usec. With the analyzer at a 45° angle to the polarization plane of the laser output, a 40% modulation of radiation intensity was observed on the oscilloscope. The corresp...

Card 1/2

ZHUKOV, Vasiliy Andreyevich; MESYATSEV, P.P., retsenzent; LICHNOV, A.I., inzh., retsenzent; SHIROKOVA, Z.G.,inzh., retsenzent; GUREVICH, B.D., inzh., retsenzent; BASTANOV, S.S., inzh., retsenzent; GOLOVINA, K.N., inzh., retsenzent; BEL'TSEV, A.N., inzh., retsenzent; SOLOMATIN, V.V., inzh., retsenzent; MARSHEV, N.I., inzh., retsenzent; MARSHEV, N.I., inzh., retsenzent; BALASHEVA, T.I., inzh., retsenzent; GIRSHMAN, G.Kh., red.; ANGELEVICH, N.E., red.; SOBOLEVA, Ye.M., tekhn.red.

[Technology of the manufacture of radio equipment] Tekhnologiia proizvodstva radioapparatury. Moskva, Gos.energ.izd-vo, 1959. 636 p.   (MIRA 13:3)
                    (Radio industry)

ACC NR: AT7005248   SOURCE CODE: UR/2631/66/000/008/0079/0084

AUTHOR: Belyayeva, G. I.; Anfinogenov, A. I; Solomatin, V. Ye; Ilyushchenko, N. G.

ORG: none

TITLE: On the structure and properties of an electrolytic aluminum coating on molybdenum

SOURCE: AN SSSR. Ural'skiy filial. Institut elektrokhimii. Trudy, no. 8, 1966. Elektrokhimiya rasplavlennykh solevykh i tverdykh elektrolitov; fiziko-khimicheskiye svoystva elektrolitov i elektrodnyye protsessy (Electrochemistry of fused salts and solid electrolytes; physicochemical properties of electrolytes and electrode processes), 79-84

TOPIC TAGS: metal plating, molybdenum, metal coating

ABSTRACT: Aluminum coatings deposited on molybdenum by electrolyzing a fused electrolyte of the composition (wt. %) $BaCl_2$ 73, NaF 11.5, AlF_3 15.5 were studied by metallographic and x-ray structural analyses, by measuring the polarization of the molybdenum cathode, and by determining the high-temperature strength and oxidation resistance. The phase composition of the Al coating was studied as a function of the electrolysis conditions (current density and time). Electrolytic saturation of the molybdenum surface with aluminum was found to lead to the formation of two- and three-layer coatings, depending upon the electrolysis conditions. To protect molybdenum from high-temperature oxidation, an aluminum coating of the composition Al, $MoAl_{12}$,

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SOURCE CODE: UR/0276/66/000/008/B064/B064

ACC NR: AR6035432

AUTHOR: Belyayeva, G. I.; Anfinogenov, A. I.; Solomatin, V. Ye, Ilyushchenko, N. G.

TITLE: Structure and properties of an electrolytic aluminum coating on molybdenum

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya, Abs. 8D410

REF SOURCE: Tr. In-ta elektrokhimii. Ural'skiy fil. AN SSSR, vyp. 8, 1966, 79-84

TOPIC TAGS: molybdenum, electrolytic deposition, aluminum plating, metal coating, surface hardness

ABSTRACT: The authors present results of investigations of the structure and properties of aluminum coatings on molybdenum, produced by electrolysis of molten salts. For the alitiration of the molybdenmum (sintered rod), an electrolyte was used with composition (% by weight) $BaCl_2$ 73, NaF 11.5, AlF_3 15.5. The surface of the sample was polished before the alitiration. The structure and the composition of the obtained coating were investigated metallographically and by x ray structure methods. The microhardness distribution over the depth of the coating was measured with a PMT-3 instrument with a 20 gram load. The tests for heat endurance were made at 1200° in air. It is shown that the electrolytic saturation of the molybdenum surface with aluminum leads to formation of two- and three-layer coatings, depending on the electrolysis conditions; to protect the molybdenum against the high-temperature oxidation, aluminum coatings with compositions Al, $MoAl_{12}$, and Mo_6Al_8 are recommended; a coating of a given composition can be obtained at a temperature of 900°, current density 0.1

UDC: 621.357.7: 669.718

Card 1/2

KORSHAK, V.V.; ZAMYATINA, V.A.; BEKASOVA, N.I.; OGANESYAN, R.M.;
        SOLOMATINA, A.I.

    Polyesters of boric acid. Izv.AN SSSR.Ser.khim. no.8:1496-1502
    Ag '63.   (MIRA 16:9)

    1. Institut elementoorganicheskikh soyedineniy AN SSSR.
                         (Boric acid) (Esters)

KORSHAK, V.V.; SOLOMATINA, A.I.; BEKASOVA, N.I.; ZAMYATINA, V.A.

Polycondensation of trimeric dimethylphosphinoborine with boron-substituted borazoles. Izv. AN SSSR Ser.khim. no.10:1856-1857 O '63. (MIRA 17:3)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

L 8488-65   EWT(m)/EPF(c)/EPR/EWP(j)/EWA(h)   Pc-4/Pr-4/Ps-4/Peb   ASD(m)-3/
AS(mp)-2/RFL   WW/RM

ACCESSION NR: AP4044710   S/0062/64/000/008/1541/1543

AUTHOR: Korshak, V. V.; Zamyatina, V. A.; Solomatina, A. I.

TITLE: Phenylphosphine—borane complex pyrolysis

SOURCE: AN SSSR. Izvestiya, Seriya khimicheskaya, no. 8, 1964, 1541-
1543

TOPIC TAGS: phenylphosphine borane complex, (phenylphosphino)borane
polymer, inorganic polymer, boron containing polymer, phosphorous
containing polymer

ABSTRACT: In an attempt to prepare a homogeneous tridimensional net-
work polymer of the composition (C_6H_5PBH) the pyrolysis of the
phenylphosphine—borane complex at 150—250C was performed for the
first time. It was found that at 150C, the complex liberates 1 mol
of hydrogen to form a (phenylphosphine)borane polymer with a mole-
cular weight of 2150, which is probably linear in structure. With
increasing temperature, the amount of liberated hydrogen increases to
a maximum of 1.5 mol and the linear polymer becomes cross linked.
The pyrolysis is accompanied by degradation, the rate of which in-
th   which results in the splitting off of

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ACCESSION NR: AP4044710

creases with temperature, and which results in the splitting off of phenylphosphine and the formation of a boron-rich residue capable of being oxidized in air. The pyrolysis is assumed to proceed as follows:

$$4(C_6H_5PH_2 \cdot BH_3) \xrightarrow[-4H_2]{140^\circ} 4(C_6H_5PHBH_2) \xrightarrow[-H_2]{250^\circ} (C_6H_5PB)_2B_2H_2 + 2C_6H_5PH_2 \uparrow$$

Orig. art. has: 1 formula and 1 table.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Organoelemental Compounds, AN SSSR)

SUBMITTED: 20Jan64   ATD PRESS: 3108   ENCL: 00

SUB CODE: IC, MT   NO REF SOV: 000   OTHER: 004

Card 2/2

L 41351-65   EWG(j)/EWT(m)/EPF(c)/EPF(n)-2/EPR/EWP(j)/T/EWA(h)/EWA(l)   Pc-4/
Pr-4/Ps-4/Pt-10/Peb/Pu-4   RPL   WW/GG/RM
ACCESSION NR: AP5001997   S/0020/64/159/006/1361/1363

AUTHOR: Zamyatina, V.A.; Korshak, V.V. (Corresponding member AN SSSR); Solomatina,
A.I.: Childishev, Yu. G.; Tsetlin, B.L.; Rafikov, S.R.; Glazunov, P. Ya.

TITLE: Radiation synthesis of polymers with the base of trimeric cyclic dime-
thyl phosphinoborine

TOPIC TAGS: radiation polymer synthesis, trimeric cyclic dimethyl phosphino-
borine, irradiation effect, linear structure, polycyclic structure

ABSTRACT: It was shown recently (V. V. Korshak and N. I. Bekasova, Vy*so-
komolek. Soyed. 5, 1447 (1963)) that borasoles are polymerized under the action
of ionizing radiation and form polymer products of polycyclic structure. It can
be expected that irradiation may produce a similar effect in cyclic phosphinobor-
ines. The authors selected for this purpose the trimeric cyclic dimethyl phos-
phinoborine. The irradiation was accomplished with the electronic accelerator of

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L 41351-65
ACCESSION NR: AP5001997 3

tne Institute for Physical Chemistry AN SSSR at 800 kv with a dose of 6.5×10^4
rad/sec. With irradiation of 4×10^{16} ev/gm. sec, about 70% of the original
monomer was transformed into polymer products of two types, one of which was
insoluble in benzene, the other soluble. Their composition and thermomechani-
cal properties were investigated. It was established that the products formed
are polymers of a linear and of a polycyclic structure. Orig. art. has: 2 figures

ASSOCIATION: Institut elementoorganicheskikh soyedineniy , Akademii nauk
SSSR (Institute of Organoelemental   . Compounds, Academy of Sciences, SSSR)

SUBMITTED: 07Jul64   ENCL: 00   SUB CODE: GC, NP

NR REF SOV: 001   OTHER: 002

Card 2/2

3,1810
3,9120

39101

S/169/62/000/006/084/093
D228/D304

AUTHORS: Fel'dshteyn, Ya. I. and Solomatina, E. K.

TITLE: Some questions of the geographic distribution of auro-
             ras in the northern hemisphere

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 6, 1962, 24-25,
             abstract 6G141 (V sb. Polyarn. siyaniya i svecheniye
             nochn. neba, no. 7, M., AN SSSR, 1961, 51-60)

TEXT: Diurnal changes in the appearance frequency of zenith auro-
ral forms are analyzed from the material of forty northern hemi-
sphere stations, situated in a large latitudinal interval -- from
the auroral zone to the circumpolar region. The diurnal changes
were calculated from auroral ascaplots for the first observational
season of the IGY (the winter of 1957-1958). It appeared that ac-
cording to the nature of the diurnal variations in the frequency
of auroral appearances, the high-latitude region can be split into
four belts: a) At stations (Arctic II, Nord, Alert), situated in
the circumpolar region, there is a maximum in the frequency of

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Some questions of ...

auroral appearances at about noon local time, with a weaker maximum in the morning hours local time (around local geomagnetic noon); around midnight the frequency of auroral appearances is minimal. b) Stations near the second auroral zone (Resolute Bay, Godhaven, Cape Tobin, Murchison Bay (Merchison Bay)) have a morning maximum at 6 - 8 hrs local time. At Stns. Murchison Bay and Cape Tobin a further maximum appears in the evening hours. c) At stations located between the first and second auroral zones, there are two maxima in the diurnal changes of the frequency of auroral appearances -- in the morning and in the evening; in comparison with the extremes, observed at stations situated near the second zone, the maxima shift closer to midnight. d) Stations near the first auroral zone are characterized by one maximum at about midnight local time. The morning maximum appears on moving from the main auroral zone towards higher geomagnetic latitudes, starting from $\psi \sim 67°$ in the eastern hemisphere and from $\Phi \sim 73°$ in the western, i.e. at 3 - 4° to the north of the main auroral zone. A comparison is given for the diurnal magnetic activity variations in the winter of 1957-1958 and the appearance of auroras in different belts

Card 2/4

Some questions of ...

in this winter. The magnitude of the Q-index is taken as a measure of the magnetic activity: a) Near the geomagnetic pole the magnetic activity for the period November 1957 - February 1958 is maximum around local noon. In the circumpolar area the maximum in the diurnal changes of magnetic disturbances cannot coincide with that for the frequency of auroral appearances; the extreme for the appearance of auroras somewhat anticipates the maximum for the magnetic activity's diurnal variation. b) In the area of the second auroral zone the maximum in the daily changes of the frequency of auroral appearances somewhat anticipates the corresponding maximum for the diurnal magnetic activity changes; magnetic disturbances are not related to the appearance of auroras at the zenith. c) Between the first and second auroral zones the morning maximum for the frequency of auroral appearances coincides or somewhat anticipates that for the magnetic activity. The evening maximum in the frequency of auroral appearances falls on the magnetic activity minimum and, on the contrary, the evening magnetic activity maximum falls on the minimum for the frequency of auroral appearances. d) Near the auroral zone the maxima for the diurnal magnetic activity and auro-

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Some questions of ...

39101
S/169/62/000/006/084/093
D228/D304

ral changes either coincide or are displaced in relation to each
other. In the latter case the maximum in the frequency of auroral
appearances anticipates that for the magnetic activity's diurnal
variations. In high latitudes the relation of the latitude of auro-
ral appearances to the universal time can have a double character:
1) Bot. the degree of magnetic disturbance and the intensity and
the frequency of auroral appearances strengthen simultaneously
with respect to universal time. 2) Depending on the orientation
of the earth's magnetic field relative to the line earth-sun, the
most favorable conditions for the surmounting of the earth's mag-
netic barrier by solar corpuscular flows are created at definite
moments of universal time; therefore, auroras and magnetic distur-
bances arise most often in these hours. The changes due to the
first cause are determined by variations in the density and ener-
gies of a corpuscular flow's particles. Those induced by the second
cause depend on the magnetic field's orientation relative to the
line earth-sun. /¯Abstracter's note: Complete translation._7

Card 4/4

FEL'DSHTEYN, Ya.I.; SOLOMATINA, E.K.

Auroras in the Southern Hemisphere. Geomag. i aer. 1 no.4:
534-539 Jl-Ag '61.   (MIRA 14:12)

1. Institut zemnogo magnetizma, ionosfery i rasprostraneniya
radiovoln AN SSSR.
                         (Auroras)

L 23291-65   EWT(1)/FSF(h)/FSS-2/FS(v)-3/EWG(s)-2/FCC/EWA(d)/EEC(t) Pq-4/Pe-5/Pq-4/
ACCESSION NR: AP5001986   Pae-2/Pi-4   TT/   S/0020/64/159/006/1272/1275
                                       GW

AUTHOR: Gringauz, K. I.; Dolginov, Sh. Sh.; Bezrukikh, V. V.; Yero-
shenko, Ye. G.; Zhuzgov, L. N.; Musatov, L. S.; Solomatina, E. K.;
Fastovskiy, U. V.

TITLE: Observations using the artificial satellite Electron-2 of the
correlation between variations of the magnetic field and streams of
positive ions inside the terrestrial magnetosphere

SOURCE: AN SSSR. Doklady, v. 159, no. 6, 1964, 1272-1275

TOPIC TAGS: artificial satellite, magnetometer, positive ion, geomag-
netic field, magnetosphere, radiation belt, flux intensity, negative
ion, theoretical field, apogee distance

ABSTRACT: The artificial satellite Electron-2, equipped with magne-
tometers and a trap for charged particles, recorded positive ions of
all energies, their fluxes with energies of more than 100 ev, and
measured all three components of the geomagnetic field in the magneto-
sphere and at radiation belts. Recorded data showed a correlation
between the variations of the magnetic activity on the terrestrial

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L 23291-65
ACCESSION NR: AP5001986   0

surface and the intensities of fluxes of positive ions and the magnetic
field far from the earth. This correlation was observed on quiet days
and on days with magnetic disturbances. Numerous negative ion fluxes
were recorded on magnetically quiet days. During this time, the magne-
tometer recorded a magnetic field of regular intensity although it
exceeded the theoretical field by 20 γ. The maximum deflection from
the theoretical field was detected at the apogee of the satellite.
On 12 February 1964, all magnetic observatories on the earth recorded
magnetic disturbances of sudden commencement while the trap in the
satellite recorded positive ion fluxes excusively of an intensity
of $4 \cdot 10^{-10}$ amp. At this time the satellite was at apogee. The magne-
tometer recorded a rapid increase in the magnetic field. Orig. art.
has: 4 figures.   [EG]

ASSOCIATION: none

SUBMITTED: 15Sep64   ENCL: 00   SUB CODE: ES, SV

NO REF SOV: 003   OTHER: 008   ATD PRESS: 3173

Ccrc 2/2

L 2885-66 'FSS-2/EWT(1)/FS(v)-3/FCC/EWA(d)/EWA(h)   TT/GS/GW
ACCESSION NR: AT5023603   UR/0000/65/000/000/0336/0341

AUTHOR: Gringauz, K. I.; Dolginov, Sh. Sh.; Bezrukikh, V. V.; Yeroshenko, Ye. G.;
Zhuzgov, L. N.; Musatov, L. S.; Solomatina, E. K.; Fastovskiy, U. V.

TITLE: Comparison of simultaneous measurements of magnetic field and positive ion
flux within the Earth's magnetosphere recorded by the Elektron-2 satellite

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow,
1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii.
Moscow, Izd-vo Nauka, 1965, 336-341

TOPIC TAGS: space environment, ionospheric physics, electron density, ion density,
earth magnetic field/Elektron 2 satellite

ABSTRACT: Measurements of charged-particle flux and magnetic field at a height of
6--11.6 R (R, Earth's radius) were made by Elektron-2. The particle trap used was
capable of recording positive ion flux with ion energy in excess of the potential
difference of the satellite with respect to its environment and electron flux with
electron energy in excess of 100 ev. The magnetometer, with orthogonally arranged
sensors, was capable of measuring the magnetic field in the range of $\pm120 \times 10^{-5}$ erg

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L 2E85-66

ACCESSION NR: AT5023603

in each component direction. Its threshold was 2×10^{-5} erg. The satellite measurements, when compared with solar activity data in the form of K_p indexes recorded via ground observatories, show inconsistencies in the correlation between the variation of magnetic activity on the Earth's surface and the variation of the geomagnetic field intensity and charged particle flux as measured by the satellite. It is uncertain whether these observations can be explained by the solar wind penetrating the magnetosphere or by near-earth plasma due to charged particles accelerated by a yet unknown mechanism. Orig. art. has: 6 figures.

[BD]

ASSOCIATION: none

SUBMITTED: 02Sep65   ENCL: 00   SUB CODE: ES,SV

NO REF SOV: 003   OTHER: 008   ATD PRESS: $\mathcal{H09}$

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L 13-66   FCS-2/SWT(1)/FS(v)-3/FCC/EWA(d)/EWA(h)   TT/GS/TM

ACCESSION NR: AT5023612   UR/0000/65/000/000/0418/0419

AUTHOR: Bezrukikh, V. V.; Gringauz, K. I.; Musatov, L. S.; Solomatina, E. K.

TITLE: Possibility of a soft electron component in the outer radiation belt, and the variations in this component

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow, 1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 418-419

TOPIC TAGS: satellite data analysis, radiation belt, electron radiation

ABSTRACT: Data are given from measurements of charged particle fluxes made by the "Elektron-2" satellite using charged particle traps. The data were obtained during passage of the satellite through the outer radiation belt in the initial stage of flight. Negative collector currents recorded in the trap varied considerably from orbit to orbit; on some orbits there were practically no negative currents. At the same time, radiation counters installed in the satellite showed a fluctuation of only 10% in the count rate for high-energy particles (E > 100 kev). Graphs are given that illustrate this phenomenon. The highest intensity of soft electrons in the outer radiation belt between 30 January and 17 February 1964 was $\sim 3 \cdot 10^8$ cm^{-2}·sec^{-1},

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L 2993-66
ACCESSION NR: AT5023612

6

recorded on 31 January 1964. Experimental data for this period indicate that
this flux is at least ten times the intensity of high-energy electrons trapped in
the outer radiation belt and recorded constantly by the radiation counter. These
results may be interpreted as evidence of a soft component in the electron fluxes
of the outer radiation belt that varies with time to a much greater extent than
does the high-energy particle flux. The soft electron region always extended
beyond the outer boundary of the radiation belt. "The authors are grateful to
S. N. Vernov, Yu. N. Logachev, E. N. Sosnovets, Ye. A. Benediktov, G. G. Getmantsev,
and N. A. Mityakov who kindly allowed us to study the results of their experiments
before publication." Orig. art. has: 3 figures.   [14]

ASSOCIATION: none

SUBMITTED: 02Sep65.   ENCL: 00   SUB CODE: ES,NP

NO REF SOV: 004   OTHER: 000   ATD PRESS: 4410

Card 2/2 /hd

SOLOMATINA, I.I.

Using ground surface data to calculate the intensity of icing on
wires at different heights. Trudy GGO no.57:40-43 '56. (MIRA 10:1)
(Electric lines—Cold weather conditions) (Ice)

36-57-69-6/16

AUTHOR: Solomatina, I. I.

TITLE: Condensation Accompanying the Mixing of Two Masses of Air (K voprosu o kondensatsii pri smeshenii dvukh vozdushnykh mass)

PERIODICAL: Trudy Glavnoy geofizicheskoy observatorii, 1957, Nr 69, pp 45-50 (USSR)

ABSTRACT: The author discusses the mixing of two masses of air with a possible amount of water vapor condensation resulting from the blending. The author examines a case when the amounts of the two air masses are not known. It is assumed that: 1) the process of mixing is adiabatic, 2) no additional vapor comes in from outside, 3) the turbulence coefficient is constant, 4) no change in heat or moisture occurs in the horizontal plane, and 5) the boundary between the two mixing air masses is at the near-surface level, with z = 0. A mathematical evaluation is given and formulas are deduced to calculate moisture and temperature for any period of time following the onset of the mixing process. The author demonstrates how the humidity saturation can be determined on the basis of temperature data. If this humidity saturation is equal to or less than the humidity obtained for the two mixing volumes, the condensation of vapor begins. The author also explains how to determine mathematically the temperature of condensation from the formula for equivalent temperatures and he deduces this formula.

Card 1/2

SOLOMATINA, I.I.

Diurnal variation of absolute humidity in the lowest atmos-
pheric layer. Trudy GGO no.94:156-162 '60.
(MIRA 13:5)

(Humidity)

BERLYAND, ...; SOLONATINA, I.I.

Theory of diurnal humidity and air temperature variations in
the lower atmospheric layer. Trudy GGO no.123:62-69 '61.
(MIRA 14:8)

(Humidity)
(Atmospheric temperature)

43067
S/531/62/000/127/002/007
I053/I242

AUTHOR: Solomatina, I.I.

TITLE: The influence of meteorological conditions on the character of daily variations of humidity

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy. no. 127, 1962. Fizika prizemnogo sloya vozdukha, 48-56

TEXT: The change of humidity with respect to time is directly dependent on the equation $W(\tau) = \dfrac{V(\tau)}{k(\tau)}$ where $V(\tau)$ and $k(\tau)$ represent the rate of evaporation and the coefficient of exchange. These quantities, in turn, depend upon the radiation balance, the soil humidity, the speed of the wind and the mean daily values of the coefficients of exchange and evaporation. In the most practical case, by expanding the value $V(\tau)$ into a Fourier series of harmonics (W'_1 and W'_2) the relation $\dfrac{W'_1}{W'_2}$ will be obtained. Two maxima (at midday and midnight) and 2 minima (in the morning and evening) of the daily

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S/531/62/000/127/002/007
I053/I242

The Influence of meteorological...

variations of humidity are deduced on condition that the value of
the coefficient of turbulent exchange exceeds the increase of the
evaporation by day. The increase of total radiation (the transition
from winter to summer) or a decrease of lattitude steps up the daily
variation of the coefficient of exchange and evaporation. The pro-
bability of appearance of a diurnal humidity minimum becomes greater
with the decrease of the W'_1/W'_2 ratio. The latter increases with
the intensification of cloud cover, the rise of soil humidity, and
wind speed. The experimental data (with a clear sky at latitude of
60° and 50°) agree with the theoretical conclusions. There is 1
figure.

Card 2/2

SEMENOVA, L.G.; SOLOMATINA, I.I.

Some results of microclimatic observations on rugged ground.
Trudy GGO no.138:38-41 '63.   (MIRA 17:2)

ACCESSION NR: AT4004717   S/2922/63/007/000/0108/0116

AUTHOR: Gracheva, V. P.; Solomatina, I. I.

TITLE: Diurnal change in absolute humidity in the surface boundary layer of the atmosphere

SOURCE: Vses. nauchn. meteorologich. soveshch. Trudy*, v. 7. Fizika prizemnogo sloya. Leningrad, 1963, 108-116

TOPIC TAGS: meteorology, absolute humidity, humidity, diurnal humidity variation, boundary layer humidity, turbulence, turbulent diffusion, temperature, air temperature, heat transfer, evaporation, atmospheric boundary layer, atmospheric turbulence

ABSTRACT: Diurnal changes in humidity in the surface boundary layer are examined by solving a combined system of equations for the turbulent diffusion of water vapor and the temperature on the ground and in the air, taking into consideration diurnal change in the exchange coefficient. The turbulence coefficient is thus expressed as two functions: one depending on time, the other on height. Because the surface boundary layer of the air is quasi-stationary, the deviations of humidity and temperature from the average daily values can be solved by the method

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ACCESSION NR: AT4004717

of consecutive approximations of the Fourier series. For investigations of
diurnal temperature changes, the turbulence coefficient is independent of time and
equal to the average daily value. To determine the diurnal change in humidity,
one must consider the variations in the exchange coefficient with time. The
deviation of the humidity from its average daily value in the layer $z = h$ is then
expressed by the formula

$$q_1 = 2a \sum_{n=1}^{\infty} \left\{ \frac{1}{\sqrt{n}} \left[W_n' \cos\left(n\omega\tau - \frac{\pi}{4}\right) - W_n'' \sin\left(n\omega\tau - \frac{\pi}{4}\right) \right] + \right.$$
$$\left. + C\left(W_n' \cos n\omega\tau - W_n'' \sin n\omega\tau\right) \right\}, \qquad (1)$$

where,

$$a = \frac{1}{\rho \sqrt{\omega k_2}}; \quad C = \frac{\sqrt{\omega k_1}}{k_1} \ln \frac{k_2}{z_0 + k_1 z};$$

k and k_2 are the average daily values of the exchange coefficient at the heights
$z = 1$ M, and $z = h_m$; W is the angular velocity of rotation of the earth;

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ACCESSION NR: AT4004717

$W_n = W_n' + iW_n''$ is the harmonic for the Fourier series for the function $W(\gamma) = \frac{V(\gamma)}{k(\gamma)}$; the functions $V(\gamma)$ and $k(\gamma)$ determine the changes in evaporation and the exchange coefficient with γ, where $\gamma = \int_o^t k(t)dt$. The diurnal changes in the exchange coefficient and evaporation from the ground are determined by the first approximation. Equation (1) allows computations of diurnal humidity variations at various heights. It also can be used to determine the number of extremes in the diurnal humidity fluctuations by merely differentiating the expression for q and equating it to zero. The equation below expresses the number of extremes during the diurnal change of absolute humidity:

$$\frac{W_1'}{W_2'} = f(\tau),\qquad\qquad (2)$$

where $\quad f(\tau) = \dfrac{\cos 2\omega\tau - \sin 2\omega\tau - 2C\sin 2\omega\tau}{\frac{1}{\sqrt{2}}(\sin\omega\tau - \cos\omega\tau) + C\sin\omega\tau}.$

Thus, the number of extremes for a certain area and season is determined by the diurnal variations of the radiation balance. On the basis of the first approximation, the diurnal change in the exchange coefficient and evaporation, and

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ACCESSION NR: AT4004717

the relationship of $\frac{W_1}{W_2}$ can be found. The size of the latter determines the type of diurnal humidity change. Research into the problem of diurnal humidity changes is important for forecasting fogs and cloudiness. Since fogs are formed at night, knowledge of nighttime humidity changes is important. Contrary to former assumptions, the present investigation demonstrated such variations to be considerable. Nighttime humidity changes are determined primarily by the redistribution of the of the initial humidity profile. The role of dew is not very important. For a determination of the initial humidity profile, data on the changes in q are required. These can be calculated by means of:

$$q_1 = \psi_0 + 2 \sum_{n=1}^{\infty} \psi'_n g'_n - \psi''_n g''_n. \tag{3}$$

where

$$g'_n = \frac{A_1'}{\Delta_n}(C'_n r'_n + C''_n r''_n); \quad g''_n = \frac{A_1'}{\Delta_n}(C'_n r''_n - C''_n r'_n);$$

$$\Delta_n = C'^2_n + C''^2_n; \quad C'_n = A'_1 + \sqrt{\frac{n\omega}{2}}; \quad C''_n = \sqrt{\frac{n\omega}{2}};$$

$$r(x_n) = e^{x_n^2} \text{erfc} \, x_n \sqrt{t}; \quad x_n = \sqrt{\frac{n\omega k_2'}{k_2'}}; \quad A_1' = \frac{k_2'}{\sqrt{k_2'} \ln \frac{k_1'}{x_0 + k_1' x}};$$

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ACCESSION NR: AT4004717

Here: ψ_0 = the average daily humidity for the past 24 hours; ψ_n', ψ_n'' are the harmonics of the Fourier series as per the formula below:

$$\psi(\tau') = \psi_0 + 2 \sum_{n=1}^{\infty} \left(\psi_n' \cos n\omega\tau' - \psi_n'' \sin n\omega\tau'\right);$$

and k_2 and k_2' are the average values of the exchange coefficient in the layer $z \geqslant h$ in conformity with $\gamma' > 0$ and $\gamma < 0$. The values of g_n' and g_n'' for various k_1, k_1', n and γ are computed. For practical purposes, these formulas are simplified for such items as: number of extremes, the more common values of k_1, k_1', etc. The article contains numerous such simplified formulas and explanations of how they affect the computation of the minimum nighttime humidity. In general, the expected minimum humidity is equal to the average value of the previous 24 hours. The expected variation for the night equals $\psi_0 - \psi_{av}$. Orig. art. has: 3 figures, 2 tables and numerous formulas.

ASSOCIATION: GGO.

SUBMITTED: 00   DATE ACQ: 27Dec63   ENCL: 00

SUB CODE: ES   NO REF SOV: 008   OTHER: 000

Card 5/5

SOLOMATINA, I.I.

Effect of the ground relief on the wind velocity and turbulent
exchange in the ground layer of the atmosphere. Trudy GGO no.158:
50-55 '64.
(MIRA 17:9)

L 54965-65   EWT(1)/FCC   GW

ACCESSION NR: AT5019736   UR/2531/65/000/172/0058/0069

AUTHOR: Solomatina, I. I.

TITLE: The effect of topography on the meteorological characteristics
of the surface boundary layer

SOURCE: Leningrad.   Glavnaya geofizicheskaya observatoriya.   Trudy,
no. 172, 1965.   Voprosy atmosfernoy diffuzii i zagryazneniya vozdukha
(Problems of atmospheric diffusion and contamination), 58-69

TOPIC TAGS: micrometeorology, atmospheric boundary layer, atmospheric
turbulence, turbulent diffusion

ABSTRACT: Meteorological observations have been carried out in the
region of the Shchekinskaya GRES during the 1961-1963 period to study
the effect of topography on the wind, temperature, humidity, and
turbulent exchange in the surface boundary layer.   The actual ob-
servation program was discussed in detail earlier by the same author
(Tr. GGO, no. 158, 1964).   The present article gives the results of
measurements of wind, temperature, and humidity and the turbulence
coefficients over terrain with relief variations of 30—70 m.   Summer

Card   1/2

1. 64965-65

ACCESSION NR: AT5019736

3

and winter data are treated separately. The author emphasizes that
the changes in the meteorological characteristics depend very greatly
on the weather conditions and the observation time. The need for
new extensive experimental data and further theoretical studies is
indicated. Orig. art. has: 1 formula, 2 figures, and 5 tables. [08]

ASSOCIATION: Glavnaya geofizicheskaya observatoriya, Leningrad (Main
Geophysical Observatory)

SUBMITTED: 00	ENCL: 00	SUB CODE: ES
NO REF SOV: 002	OTHER: 00	ATD PRESS: 4083

Card 2/2

SOLOMATINA, I.L.

Effect of meteorological conditions on diurnal humidity variations. (MIRA 15:7)
Trudy GGO no.127:48-56 '62.
(Humidity)

SOLOMATINA, K.

Intensify laboratory control. Obshchestv. pit. no. 6:38-39
Je '58.
                                                    (MIRA 11:7)

1. Nachal'nika otdela sanitarnoy sluzhby Ministerstva torgovli RSFSR.
                    (Restaurants, lunchrooms, etc.)

KRASNITSKAYA, Ye.S.; SOLOMATINA, K.Z.; FISHER, Ye.A., red.; EL'KINA,
        E.M., tekhn. red.

[Materials on food sanitation in public eating establishments
and commerical enterprises] Sbornik materialov po pishchevoi
sanitarii v predpriiatiiakh obshchestvennogo pitaniia i torgovli.
Moskva, Gostorgizdat, 1963. 270 p.   (MIRA 16:5)

1. Russia (1917- R.S.F.S.R.)Ministerstvo torgovli.
      (Food industry--Sanitation)   (Food law and legislation)

SOLOMATINA, L.N.

Ekhabi series. Trudy VNIGRI no.181:83-87 '61.
(Sakhalin—Geology, Stratigraphic)

(MIRA 15:2)

SOLOMATINA, L.N.

Possibility of using the morpnometric method of prospecting for anticline structures in the southeast of Sakhalin. Trudy VNIGRI no.224:302-310 '63.

S/056/62/043/003/063/063
B104/B102

AUTHORS: Sedov, V. L., Solomatina, L. V., Il'chenko, L. N.

TITLE: The heat conductivity of a natural magnetite crystal at low
             temperatures

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43,
             no. 3(9), 1962, 1125-1126

TEXT: The heat conductivity of a natural magnetite single crystal (from
the Ural) below $15^\circ K$ was measured using a method worked out by N. V.
Zavaritskiy and A. G. Zel'dovich (ZhTF, 26, 2032, 1956). Magnetic fields
of up to 10 koe were applied in various directions. In all measurements
the temperature gradient lay along the [111] direction of the octahedral
crystal. The results (Fig. 1) clearly show the action of the spin waves
in heat transfer. Above $3^\circ K$, heat conductivity is a linear function of
temperature, below $3^\circ K$ it is not. This deviation from linearity is related
to the activation energy of the spin waves. At temperatures around $90^\circ K$,
magnetic fields of up to 10 koe have no effect on heat conductivity within
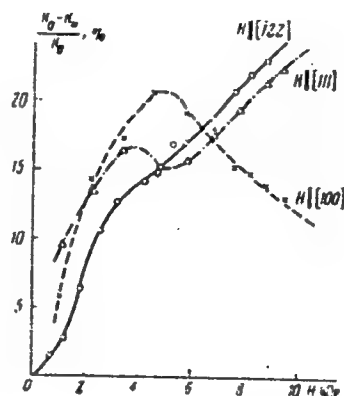the accuracy of measurement which is 2 %. There are 2 figures.

Card 1/2

The heat conductivity of a natural...

S/056/62/043/003/063/063
B104/B102

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: July 23, 1962

Fig. 1. Relative changes in heat conductivity at 5.9°K in magnetic fields of various directions.

Card 2/2

SOURCE CODE: UR/0274/66/000/003/V031/V031

ACC NR: AR6023377

AUTHOR: Solomatina, M. P.

TITLE: Investigation of the mutual influence of symmetrical cable communications circuits in a pulsed regime

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz', Abs. 3V237

REF SOURCE: Tr. uchebn. in-tov svyazi. M-vo svyazi SSSR, vyp. 26, 1965, 127-136

TOPIC TAGS: wire communication, circuit design, communication line

ABSTRACT: The process of energy transfer between wire communications circuits in the presence of electromagnetic pulses is studied. The case of energy transfer between short symmetrical circuits is considered. Formulas are derived for calculating the interaction at both ends of a communications line in a pulsed regime. [Translation of abstract]

SUB CODE: 17

UDC: 621.391.827

Card 1/1

SOLOMATINA, O.G.

Certain immunological reactions in the dynamics of the rheumatic process in children. Pediatriia no.5:39-43 S-O '54. (MIRA 7:12)

1. Iz revmaticheskoy kliniki Nauchno-issledovatel'skogo pediatriche-skogo instituta Ministerstva zdravookhraneniya RSFSR (dir. kandidat meditsinskikh nauk V.N.Karachevtseva) i Klinicheskoy detskoy bol'-nitsy (glavnyy vrach zasluzhennyy vrach RSFSR Ye.V.Prokhorovich)
(RHEUMATISM, in infant and child,
immunol. aspects)

SOLOMATINA. O. G. Cand Med Sci -- (diss) "Certain immunological reactions in the dynamics of ˄ rheumatic processes in children."Mos, 1956. 14 pp 20 cm.(Min of Health USSR. Centri/ Inst for the Advanced Training of Physicians), 100 copies (KL, 7-57, 110)

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MATVEYEV, M.P.; GAMBURG, R.L.; SOLOMATINA, O.G.

"Rheumatism in children." A.B.Volovik. Reviewed by M.P.Matveev, R.L.Gamburg, O.G.Solomatina. Pediatriia 39 no.2:87-89 Mr-Ap '56.
　　　(VOLOVIK, A.B.)
　　　(RHEUMATIC FEVER)   (MLRA 9:8)

SULOMATINA, O.O.

Periarteritis nodosa in a 14-year-old boy. Pediatriia no.2:76-79
F '57.   (MIRA 10:10)

1. Iz kafedry pediatrii TSentral'nogo instituta usovershenstvo-
vaniya vrachey (zav. - deystvitel'nyy chlen AMN SSSR prof. G.N.
Speranskiy) na baze detskoy bol'nitsy imeni Dzerzhinskogo (glavnyy
vrach Ye.G.Krayeva)
        (ARTERIES--DISEASES)

SOLOMATINA, O.G., kand.med.nauk; KLAYSHEVICH, G.I., kand.med.nauk; LEVINA,
     S.M.; IVANOVA, A.A.

     Clinical aspects of rheumatic fever in children. Sov.med. 24 no.11:
     3-8 N '60.   (MIRA 14:3)

     1. Iz revmatologicheskoy kliniki kafedry pediatrii (zav. - deystvitel'nyy
     chlen AMN SSSR prof. G.N.Speranskiy, nauchnyy rukovoditel' kliniki -
     doktor meditsinskikh nauk R.L.Gamburg) TSentral'nogo instituta
     usovershenstvovaniya vrachey na baze klinicheskoy detskoy bol'nitsy imeni
     Dzerzhinskogo (glavnyy vrach A.N.Kudryasheva).
                         (RHEUMATIC FEVER)

GAMBURG, R.L., doktor med.nauk; SOLOMATINA, O.G., kand.med.nauk

Use of hormonal preparations in active rheumatic phases in children.
Sov.med. 25 no.4:63-67 Ap '61.   (MIRA 14:6)

1. Iz kafedry pediatrii (zav. - deystvitel'nyy chlen AMN SSSR
prof. GLN.Speranskiy) TSentral'nogo instituta usovershenstvovaniya
vrachey (dir. M.D.Kovrigina).
            (ADRENOCORTICAL HORMONES)   (RHEUMATIC FEVER)

SOLOMATINA, O.G., dotsent; LYAPUNOVA, A.P., LEVINA, S.I.; KOGAN, N.M.

Differential approach to the diagnosis of mitral stenosis in children. Sov.med. 26 no.1:85-90 Ja '63.   (MIRA 16:4)

1. Iz revmatologicheskoy kliniki (rukovoditel' - prof. R.L. Gamburg) kafedry pediatrii (zav. - deystvitel'nyy chlen AMN SSSR prof. G.N.Speranskiy) TSentral'nogo instituta usovershenstvovaniya vrachey na baze detskoy klinicheskoy bol'nitsy No. 9 (glavnyy vrach A.N.Kudryashova).
          (CHILDREN—DISEASES)   (MITRAL VALVE—DISEASES)

Dissertation: "Dynamics of Accumulation and Conversion of Carbohydrates in grapes in the Loskovskaya Oblast." Cand Biol Sci, Moscow Oblast Pedagogical Inst, 13 May 54. Vecherryaya Loskva, Moscow, 3 May 54.

SO: JPR 281, 26 Nov 1954.

... ... , ... ; ... , ... ; ... ..., ... ; ... ... , ...

... t - va or equilibrium in the systems acrolein - methyl ... batch, isopropyl alcohol - allyl alcohol - water, ... allyl alcohol - secondary butyl alcohol. Zhur. prikl. ... 3 no.10: 2210-2216 O '64.

(MIRA 17:11)

SOV/ 112-58-1-175

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1958, Nr 1, p 21 (USSR)

AUTHOR: Zalkind, I. Ya., Solomatina, T. V., Vasil'yeva, G. N., and Lebedeva, M. F.

TITLE: A Lighter Type of Concrete Lining for a PK-19 Series High-Pressure Boiler (Oblegchennaya betonnaya obmurovka seriynogo kotel'nogo agregata vysokogo davleniya PK-19)

PERIODICAL: Naladochn. i eksperim. raboty ORGRES, 1956, Nr 13, pp 3-9

ABSTRACT: Bibliographic entry.

AVAILABLE: Library of Congress

1. Combustion chamber liners   2. Concrete--Applications

Card 1/1

ZAIKIND, I.Ya., kand. tekhn. n auk; SOLOMATINA, T.V., inzh.; NADZHAROV, M.A.,
    kand. tekhn. nauk.

    Fluxing coals with thigh fusion-temperature ash in cyclone firing.
    Teploenergetika 5 no.4:34-41 Ap '58.   (MIRA 11:5)

    1. Gosudarstvennyy trest po organizatsii i ratsionalizatsii elektro-
    stantsiy i Moskovskoye otdeleniye TSentral'nogo nauchno-issledovatel'-
    skogo kotloturbinnogo instituta.
                        (Combustion)   (Furnaces)

Solomatina, V.V.

Apyrase and phosphatase activities in potato tubers grown under different conditions, at different stages of growth development, in relation to the process of starch formation. A. V. Kotel'nikova and V. V. Solomatina (Lab. Physiol. Chem., Acad. Sci. U.S.S.R., Moscow). Biokhimiya 19, 141-5(1954); cf. C.A. 48, 7713e.—The apyrase activity markedly increases as the tubers mature. The activity of acid phosphatase in tuber exts. is independent of the type of fertilizer used and of the stage of the tuber maturity. A definite parallelism exists between the increase in the tuber starch content as the tuber develops and the changes in the apyrase activity in the tuber exts.
                                        B. S. Levine

SOLOMATINA, V. V.

(2)

) Some variety peculiarities of activity of apyrase in potato tubers. A. V. Kotel'nikova and V. V. Solomatina. *Doklady Akad. Nauk S.S.S.R.* 95, 325-7(1951).—The enzymes concerned with transformations of adenosinephosphates, namely apyrase and acid phosphatase, were examd. in the tubers of various varieties of potatoes. A considerable difference in the enzymic activities of 3 varieties studied was found, indicating a particularly important role of apyrase activity at the stage of tuber development at which intensive starch synthesis takes place. Generally, the varieties with low starch content have low apyrase activity, while the high-starch forms show a high activity of the enzyme. The phosphatase activity was essentially the same in all 3 varieties.
.... C. M. Kosolapof

KOTEL'NIKOVA, A.V.; SOLOMATINA, V.V.

Radiophosphorus in the study of adenosinetriphosphoric acid
metabolism in rabbits in alloxan diabetes [with summary in English].
Biokhimiia 22 no.6:954-962 N-D '57.   (MIRA 11:2)

1. Laboratoriya fiziologicheskoy khimii Akademii nauk SSSR, Moscow.
        (DIABETES MELLITUS, experimental,
         ATP metab., radiophosphorus study (Rus))
        (ADENYLPYROPHOSPHATE, metabolism,
         in exper. diabetes mellitus, radiophosphorus study
         (Rus))

KOTEL'NIKOVA, A.V.; DOVEDOVA, Ye. L.; SOLOMATINA, V.V.

Separation of adenosine phosphoric acids by the use of Russian anionibes. Biokhimiia 24 no.2:215-221 Mr-Ap '59.   (MIRA 12:7)

1. Laboratory of Physiological Chemistry, Academy of Sciences of the U.S.S.R., Moscow.
         (ION EXCHANGE RESINS,
              anion exchange resins, determ. of ATP (Rus))
         (ADENYLPYROPHOSPHATE, determ.
              anion exchange resin technic (Rus))

KELAKOVA, V.V., GOLIKOVA, I.A., PTUSHKOVA, A.V., (USSR)

"Changes in ATP and other Nucleotide Contents in
Rat Liver and Muscle in 2,4-Dinitrophenol Poisoning."

report presented at the Int'l. Biochemistry Congress,
Moscow, 10-16 Aug 1961.

KOTEL'NIKOVA, A.V.; SOLOMATINA, V.V.; GORSKAYA, I.A.

Adenosinephosphoric acid sontent of the rat liver and muscles in
dinitrophenol poisoning.   Biokhimiia 25 no.6:1085-1091 N-D '61.
                                                  (MIRA 14:5)

1. Institute of Biochemistry, Academy of Sciences of the U.S.S.R.,
Moscow.
          (PHENOL—TOXICOLOGY)   (MUSCLES)
               (LIVER)   (ADENOSINEPHOSPHORIC ACIDS)

KOTEL'NIKOVA, A.V.; SOLOMATINA, V.V.

Investigating some transformations of nucleotides from aqueous extracts of the liver and spleen of a rabbit. Dokl. AN SSSR 143 no.2:452-455 Mr '62.   (MIRA 15:3)

1. Institut biokhimii im. A.N.Bakha AN SSSR. Predstavleno akademikom A.I.Oparinym.
             (NUCLEOSIDE MONOPHOSPHATE KINASE)
             (ADENYLATE KINASE)
             (LIVER)
             (SPLEEN)

KOTELNIKOVA, A.V.; SOKOLATINA, V.V.

Study of the ability of some nucleotides to an electrolytic reduction. Biokhimiia 30 no.4:816-824 Jl-Ag '65.

(MIRA 18:8)

1. Institut biokhimii imeni A.N. Bakha AN SSSR, Moskva.

BYBOCHKIN, Aleksey Mironovich; LUGOV, S.F., nauchn. red.;
   SOLOMATINA, Z.D., ved. red.

   [Tungsten deposits and the characteristics of their
   distribution] Mestorozhdeniia vol'frama i zakonomerno-
   sti ikh razmeshcheniia. Moskva, Nedra, 1965. 235 p.
                                  (MIRA 19:1)

SOLOMATINA, Zinaida Fedorovna, komandir korablya, Geroy Sotsialisticheskogo
Truda, delegat XXII s"yezda Kommunisticheskoy partii Sovetskogo
Soyuza.

Clear objective. Grazhd.av. 18 no.12:1 D '61.   (MIRA 15:1)
(Aeronautics, Commercial)

SOV/132-58-12-4/14

AUTHORS: Blinov, N.I., Kontorshchikov, P.V , Lyubimov, V.P., Solomatov,
              M.A. and Vershinin, Yu.I.

TITLE: To Increase the Durability of Shot Boring Bits (Povysheniye
              stoykosti drobovykh koronok)

PERIODICAL: Razvedka i okhrana nedr, 1958, Nr 12, pp 24-31 (USSR)

ABSTRACT: The Sverdlovsk Mining Institute conducted extensive tests
              with different shot boring bits to establish the main factors
              which   increase the resistance to wear of the bits under
              different geological conditions. These factors are: 1) the
              influence of the hardness of shot boring bits on the drilling
              speed; 2) the influence of the chemical composition of these
              bits on their resistance to wear and on the drilling speed;
              and 3) the influence of the shape of the bits on their re-
              sistance to wear and on the drilling speed (See Graphics 1
              to 7). The following conclusions were reached: 1) in the
              drilling of bore holes with tempered steel shots, the boring
              bits must have vertical rectangular indentations. They are
              most simple to manufacture, maintain constant pressure on
              the rock and increase drilling speed; 2) the drilling speed
Card 1/2   depends on the shape of the indentation, its width and height

To Increase the Durability of Shot Boring Bits   SOV/132-58-12-4/14

and also on the thickness of the walls and the hardness of the metal of the bit. Bits with a rectangular indentation and with 10 - 12 mm thick walls give the best results; 3) the basic parameters of the bit must be as follows: a) a rectangular 150 - 200 mm high and $1/4 - 1/8 \pi D$ wide indentation; b) the walls of the bit must be 10 - 12 mm thick; c) the total height of the bit must be 250 - 300 mm; 4) the shot boring bits must be made from steel of the brands U12S, 30KhGS, 40Kh and 45, tempered for a metal strength of 25 - 30 H_{Rc}.

There are 7 graphs, 1 table and 10 Soviet references.

ASSOCIATION: The Sverdlovskiy gornyy institut (The Sverdlovsk Mining Institute)

Card 2/2

14(6)
AUTHOR: Solomatov, V.I., Engineer   SOV/98-59-4-4/17

TITLE: On the Problem of Selecting the Type of Spillway
               Structure (K voprosu o vybore tipa **vodosbrosnogo**
               sooruzheniya)

PERIODICAL: Gidrotekhnicheskoye stroitel'stvo, 1959, Nr 4, pp
               20-23 (USSR)

ABSTRACT: The author stresses the importance of two-storied
               dams such as the Ivan'kovskaya and Uglichskaya plo-
               tiny (Ivan'kovo and Uglich dams) and the Rybinsk dam
               equipped with bottom openings. **Mosenergo** under whose
               administration are the Upper Volga hydroelectric
               power **plants,** has much experience in operating them,
               The control data of the Gidrotekhnicheskaya sluzhba
               (Hydrotechnical Service) of the Mosenergo also re-
               veals that the two-storied dams perform excellently
               under any conditions, bottom openings open or partly
               open. Apart from a 10-15% saving in concrete, they
               have a steadier flow capacity and are more suitable
Card 1/3   during ice-drift periods than dams of the conventional

On the Problem of Selecting the Type of Spillway Structure

type. The two-storied dams are especially well
suited for medium-pressure hydroelectric power
plants to be erected on large rivers flowing through
the great plains of the USSR. The author uses the
following formula to ascertain the amount of water
discharge during the period T (from the moment the
dam openings are open to the moment the reservoir
is filled):

$$\bar{Q}_{1,2} = \frac{\sum^{T} Q_{oi}\Delta t_{i} - \sum^{T} Q_{2i}\Delta t_{i} - \sum \Omega_{i}\Delta h_{i}}{T_{1,2}},$$

whereby $\sum^{T} Q_{oi}\Delta t_{i}$ is the overall influx into the re-
servoir during the period T; $\sum^{T} Q_{2i}\Delta t_{i}$ is the water

Card 2/3   discharge through the power plant during that time;

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On the Problem of Selecting the Type of Spillway Structure

$\sum c_i \Delta h_i$ is the part of the outlet kept back in the reservoir during that time; c_i is the average area of the reservoir surface when reaching the value h_i. There are 3 graphs.

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SOV/98-59-8-4/33

14(10,11)
AUTHORS: Berezinskiy, A.R., Professor, Doctor of Technical Sciences, and
            Solomatov, V.I., Engineer

TITLE: The Use of Plastics in Hydraulic Construction Work

PERIODICAL: Gidrotekhnicheskoye stroitel'stvo, 1959, Nr 8, pp 12-17 (USSR)

ABSTRACT: The article opens with a general introduction on the importance of
            synthetic materials, stating that as a result of a resolution pass-
            ed by the May Plenum of the Party Central Committee, the output of
            plastics is to be increased sevenfold, one-third of all production
            being devoted to construction materials. A short account of the
            main features and properties of plastics is given, and the author
            then proceeds to a review of the part played by plastics in the
            field of hydraulic construction work. The primary advantage of
            plastics is that they are waterproof, there being 4 basic methods
            of application: 1) Plastic sheeting, usually polyethylene, polyi-
            zobutylene (oppanol A and BA) or polyvinyl chloride (mipolam, etc.),
            which is used for anti-filtration screens in dams or for water-
            proofing tunnels, etc. Examples given of this type of application

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SOV/98-59-8-4/33

The Use of Plastics in Hydraulic Construction Work

are the Semmering tunnel in Austria, the subway in Stockholm, and research is being conducted by the VNIIGiM   and the East German Institute of Hydraulics. A cementless sand concrete, bound by furfurole, developed by the Central Scientific Research Institute of Subterranean Mining Construction Work, is also briefly described; 2) this method entails infiltrating the plastic (bitumen, paraffin, etc.) into the pores of the concrete after it has set, and the results of tests by the NIS Gidroproyekt are given; 3) the painting of the surface of concrete — not a new method, but one which has recently extended to asphalts and plastics as well as bitumen. Research is being carried out by the Leningrad Metrostroy; 4) the atomization of plastics over the surface of concrete, and a waterproof asphalt plastic known as "etizol" has been developed by the TsNIIS. The author goes on to discuss the part played by individual components made from plastics, citing as examples the use of Mark B laminated wood plastics (DSP-B, GOST 5704-51) by the Gidrostalproyekt in the form of runners for sliding bearings in a number of GES projects, and the use of the same plastic on the Moskva

Card 2/4

The Use of Plastics in Hydraulic Construction Work

Canal for bushes and bearings in turbines, pumps, etc. The possi-
bilities of whole construction units being made of plastics (such
as ships' hulls) are touched on, and then a rapid survey is made
of the use of plastics as elements for joining 2 components, i.e.,
as joints, in the form of plastic strips which are stuck to the
surface of the concrete by special adhesives (Nr 88, according to
the NIS of the Gidroproyekt); as bungs for warping seams, replac-
ing metal fillings (mention is made of the use of polyvinyl chlo-
ride bungs in the Kremenchug GES project); and also as adhesives,
research on which has been conducted in East Germany, Czechoslo-
vakia and by the Khar'kov Institute of Engineering and Construc-
tion. The last section of the article is devoted to the use of
plastics in major construction work, and briefly describes work
carried out at a number of Moscow ferro-concrete works by the
Scientific Research Institute for Construction of the Ministry of
Construction of the RSFSR, and also the work of the Institute for
Foundations and Underground Construction in the field of the ap-
plication of synthetic tars for strengthening foundation dams.

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SOV/98-59-8-4/33

The Use of Plastics in Hydraulic Construction Work

There are 41 references, 16 of which are Soviet, 7 English, 7 West German, 4 American, 2 Czech, 1 East German, 1 Spanish, 1 Italian, 1 Hungarian, and 1 Dutch.

Card 4/4

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15.8340

AUTHOR: Solomatov, V. I., Engineer

TITLE: Concrete containing furan resin

PERIODICAL: Gidrotekhnicheskoye stroitel'stvo, no. 9, 1960, 16-17

TEXT: The author describes measures for increasing the imperviousness, strength, and acid resistance of concrete. Collaborators of VNIIST and NIIPlastmass studied the addition of furyl alcohol to the concrete mixture. The following recipe is given: Approximately 57 kg of furfuryl alcohol, 8.5 kg of aniline hydrochloride, 334 kg of cement, and 134 kg of water are to be added to 1 m^3 of concrete. This concrete is well suited for the production of water containers and similar objects. Collaborators of TsNIIPodzemshakhtstroy and the Kafedra plastmass MKhTI imeni D. I. Mendeleyeva (Department of Plastics of the MKhTI imeni D. I. Mendeleyev) developed a mineral organic concrete containing no cement. This type of concrete is practically a plastic with mineral filler. In this case, furfurol acetone monomer, furfurol, benzene sulfo acid, and building sand were used. The concrete is solidified by polymerization of the monomer.

Card 1/2